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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,634	09/27/2001	Yasuo Yamanaka	214231US3	9699

22850 7590 05/18/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

VARGOT, MATHIEU D

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,634

Applicant(s)

YAMANAKA ET AL.

Examiner

Mathieu D. Vargot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 35-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/27/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Applicant's election without traverse of Group I, claims 1-34 in the response of March 5, 2004 is acknowledged.

2. Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant has drafted the claims so that the term "contacting" is used as pertaining to the temperature control member—see claim 4, for instance. However, certain of the claims (ie, claims 6 and 7) call for the annealing step to use a "non-contacting" heating means. Note also that the apparatus claims 18 and 23 call for a temperature control member "contacting" the molded article. Since heating or cooling by contact is not the same as such done by non-contacting means, it is unclear whether applicant is in fact contacting or non-contacting the article when it is cooled or annealed in the claims which do not positively recite such. If the case is that either embodiment can be used, the claims should be set forth so that a clear line of distinction is drawn between the two embodiments. As it stands, it is not clear which claims are drafted to a contacting and which are drawn to a non-contacting cooling or annealing unless such is positively recited and this makes the former claims indefinite since they are clearly subject to interpretation. The same can also be said of the recitations concerning what surface of the element is being contacted for the cooling or annealed. Certain claims (ie, claims 2 and 3) call for annealing a surface "other than the optical surface" while other claims call for cooling the optical surface (see claim 8). Again, the scope of the claims where no such recitation occurs is indefinite for the reason already noted. Clarification is

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required. Also, it should be specifically pointed out exactly what constitutes the "optical surface" of the optical element. In claims 1, 18 and 23, applicant recites that the optical element is "naturally cooled" (see claim 1, lines 10-11) after removal from the mold, when in fact the element is annealed and cooled. This would not appear to be "natural" cooling, such being interpreted as cooling to room temperature without any stimulus or cooling means. Applicant needs to define what is meant by "natural" cooling. Also, the independent claims (see claim 1, line 2) call for "ejection" molding, when in fact such would appear to be "injection" molding. Claim 1 is indefinite in reciting at line 11 "comprising the step of..." when in fact many steps are required to make the element besides merely cooling. Applicant should recast this as a Jepson claim (ie, "wherein the improvement is..." or set forth the claim reciting the necessary steps to make the optical element. At line 13 of claim 1, the language "with priority in a state" is stilted and should be deleted. Also, it should be clarified in claim 1 that an annealing is being performed.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 5, 8, 9, 14, 15, 18, 20, 23, 31 and 32 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent 11-77842.

The applied reference discloses the instant method and apparatus for annealing an injection molded optical element after same has been removed from the mold wherein the element is heated up to an annealing temperature range which is less than or equal

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to the glass transition temperature of the resin material and then cooled -- to reduce the RI distribution as disclosed (but not claimed) by applicant. The cooling starts after the heating within the temperature range have been completed, which of course constitutes annealing. The abstract does not specifically teach any particular portion of the element being annealed, and it is submitted that all portions of the element are annealed, thereby "reading on" instant claim 2. I.e., claim 2 specifies annealing a portion "other than the optical surface" but does not specifically state that the optical surface is not annealed. By annealing the entire molded element, the reference would in fact anneal a portion of the element other than the optical surface and hence encompasses instant claim 2. The heating process itself implies a temperature control member (as recited in instant claim 3) as such is defined in the instant specification. Since the optical element is heated after it is removed from the mold, it is submitted that instant claims 14 and 15 are met in the process of Japanese -842. Apparatus claims 18 and 23 are submitted to have been met for the same reason as process claim 1 and claims 20, 31 and 32 are rejected for the same reasons as claims 3, 14 and 15.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6, 7, 10-13, 16, 17, 19, 21, 24-30, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 11-77842.

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The applied reference discloses the basic claimed process and apparatus as set forth in paragraph 3, supra, Japanese -842 essentially lacking the aspects of the heating means being non-contacting, that the temperature control is based on the surrounding temperature, the exact annealing rate and the exact lower limit for the heating temperature range. While the exact manner of heating is not explicitly taught in the abstract of Japanese -842, certainly non-contact means are well known in the art and one of ordinary skill would have readily used them in the process and apparatus of the applied reference to facilitate the annealing. Given that the heating is non-contact, it would have been obvious to control the temperature of the temperature control member based on a surrounding temperature to ensure that the desired temperature range is maintained for the heating and cooling. Finally, the exact annealing rate and exact temperature range constitute process parameters well within the skill level of the art. Note that the abstract of the applied reference teaches the lower limit to be 25 deg C less than the glass transition temperature instead of the instant 40 deg C less than the glass transition temperature. It is submitted that either would have been obvious over the other as a lower limit for the annealing temperature dependent on particular resin used and typical annealing temperatures normally employed.

5.Applicant is requested to provide a translation of pertinent parts of Japanese 11-77842 or supply an English language equivalent if such is readily available.


6.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on 571 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
May 14, 2004


Mathieu D. Vargot
Primary Examiner
Art Unit 1732

5/14/04